

The application of electronic management in the agricultural extension organization in Iraq

Majeed Hadi Salih Al-Hamdany¹ and Hakeem sultan abd Al-Rekibe²

¹Center for technologies Biotechnology and environmental, University of Fallujah, Iraq.

²Agriculture Collage, University of Waist, Iraq.

Email: Dr.majeed@uofallujah.edu.iq

Abstract

The application of electronic management in the agricultural extension organization in Iraq has been studied through four fields in the application, as the form included four item, namely: scientific recommendation, extension activities, agricultural employees, and administrative affairs, to enhancing the ability to implement electronic management in the agricultural extension organization. This research was executed in the province of Iraq. The provinces It was divided into four regions, which is next: Northern, Central, Middle Euphrates, and Southern governorates, 4,4,4,3, respectively, the study was carried out of 400 agricultural employees, the a proportional sample of 50% from the total respondents, which included 16 extension centers, 57 extension farms, the Agricultural Extension and Training Department Center, The descriptive approach was used to achieve the objects of the research about the electronic management of the extension organization in Iraq, the data was collected using the questionnaire, for analyzed the data use the (Frequency, and percentage). the results showed that the application of electronic management in the agricultural extension organization is Weak, and a few departments, divisions, extension centers and extension farms of the agricultural extension organization use electronic management in performing agricultural extension activities to communicate scientific recommendations to farmers and deal with agricultural employees in modern management. the recommended to use electronic management in the agricultural extension organization to save time and effort in communicating agricultural scientific guidelines quickly and communicating what is modern to farmers in developing agricultural production.

Keywords: the application, E- management, Agricultural extension organization, Management.

1. Introduction

Electronic management "e-management" It is an integrated electronic system that aims to convert ordinary administrative work from traditional management to computer management by using on strong information systems that help in making administrative decisions. Electronic management can include internal and external communications For any organization, the aim is to introduce full transparency and accountability which leads to improved electronic management in the organization. The world witnessed in the late twentieth century and with the beginnings of the twenty-first century of scientific progress as a result of tremendous technical developments, the most important of which is networks and communications, all organizations were forced to use new administrative methods to keep pace with this technical development, and among these methods is what is known as electronic management It is clear and indispensable in the management of both organizations, the Agricultural Extension Organization, and it mentions [1]. Agricultural extension is very importance as a continuous educational process it will to develop the agricultural through the transfer of agricultural information to farmers by the modern technology methods. and among these important methods (electronic management) it will lead to improve application of scientific information in cultivation and increase production, by use Agricultural extension works successful management, especially electronic management [2]. The concept of electronic agricultural extension is a modern system in the use of computers, Internet networks, and software, , in the Arab countries the agricultural extension agents still use to traditional management. despite having the modern communication components Electronic guidance it can be provided directly by the agricultural guide who represents the extension organization and the farmer, the need for high qualification of extension workers and the scientific level as well as the farmer's to gated agricultural information at any time and place. [3]. The agricultural electronic extension still faces so many problems in the use it, and that of extension organizations are characterized by try to link this modern technology and its specificity of linking farmers to the world and modern information with agriculture [4]. The concept of electronic management is a new approach investment of information and communication technologies in performing the main functions of management at the organizational levels in all the organization the world characterized by rapid change to become a feature of the modern of organizations ,the organization that can deal with



difficult conditions and complex variables it be more effective, efficient, more stable. The organizations that can stay to become a major part of the modern economy, and also enable to face new competitors or new technologies in the work environment as well as the contributions of electronic management in improving the level of Organizational knowledge in the organizations, which will be lead to the increasing the quality of outputs, reducing costs, and speed in completing the work of the organization and its employees as well as completing the transactions of farmers associated with it [5]. The change from traditional management to electronic management, according to stages the state institutions, with all government information and its modern information into electronic information [6]. The electronic management aims to develop the traditional public administration and to develop performance by using modern digital technologies of solutions and systems that will develop the work in the field of labor, It is one of the professional staff that can deal with modern technologies, reduce costs by facilitating the process of communication between the departments of the same organization, Providing a database and linking it to decision-making centers, Employing information technology to support and build a positive organizational culture for all employees . [7], the requirements of the strong electronic management , fast and secure network infrastructure, a strong information structure (strong and compatible information systems among them), Continuous technical support and development of various information systems to the Electronic Management [8]. The improving of organization's e-administration performance helps to improve procedures for the provision of services which facilitate business transactions provided by the organization to its customers . also it can provide gated to data and information as well as Reducing administrative complications, as e-administration contributes to radical changes at the level of procedures by transforming it into a technical and reduced process that does not require much effort and time, This is by providing the student with continuous service through the internet, especially as this possibility is not limited by time or place, and speed in completing work [9]. There are many problems facing the application of electronic management in the Arab world, so many governments cannot to changed their traditional procedures even with the use of modern computers and the interesting citizens and the private sector was not the focal point in government websites [10], the electronic management help traditional organizations to transform into electronic organizations, This processes help to be the of the electronic organization very strong in the future, and support the senior management: the senior management must provide the implementing team for the electronic management the necessary support for implementation, as well as contact plans with the relevant authorities [11], the transition to electronic management need several stages to complete the process achieves the desired aims. Among these stages: the conviction and support of the organization's senior management-training and qualification of employees – documentation, and development of work [12], the stages of the transition to electronic management that providing the infrastructure for electronic management - means the infrastructure, the perceived aspect of electronic management, from securing computers, connecting fast computer networks and the devices attached to them, and securing modern means of communication [13], flows to structures designed based on information flows.

1.1. The Computer

A computer is a group of electronic devices from the Meaning of (equipment) working together through a set of instructions (software),[14]. Definition of The computer is a device that is able to execute an enormous amount of orders according to special instructions used in doing so or relying on previously stored data, [15].

1.2. DATA

[16],Definition the Databases as it is Collection of consolidated data Either these data are recorded manually or electronically. As Definition of A group of files related to each other , Including data related to a specific item Until it is activated these rules It must operate according to the system, It is called a data processing system (Data Processing System), Which receives data Processed and then converted into information [17]. The Agricultural Extension organization success in fulfilling its role in agricultural and rural development in transferring and communicating new agricultural information and technology to farmers and rural people and persuading them to adopt and continue its application, in addition to transferring the problems facing them to researchers in the research centers to find solutions Convenience and applicability via prepared networks.

1.3. Networks

Defined the network is: technology is an approach to network management that enables dynamic, programmatically efficient network configuration in order to improve network performance and monitoring, making it more like cloud computing than traditional network manage [18]. It is also known as linking a group of computers with the use of communication media to form a network that exchanges data and information between the computer systems associated with the network [19]. The communication network in the electronic administration of the agricultural extension organization is a group of computers that works to link the extension and research centers, agricultural directorates, extension centers, and agricultural extension

farms in villages and farmers, and the management of a huge amount of data and the collection, preparation, and dissemination of information [20].

1.4. Research Problem

The organizations work in the great competition to achieve the objectives through their employees, especially after the use of modern technology in the world. The agricultural extension organization that exceeds the accelerating challenges through excellence in its work, in this time it shows the need to use the electronic management. Under the global transformations successive in the fields of economic, technological, political, social and cultural factors have produced very important and influences to the issue of electronic management and the need for coverage of all sectors. The agricultural extension organization is one of those organizations that must be responsible to achieve success and benefit from the existing development in the world especially in the agricultural field, Iraq suffers from a clear agricultural deficit and is an alternative to other resources for social development and improvement of its. The main objective of this research was the application of electronic management in the agricultural extension organization in Iraq.

1.5. RESEARCH OBJECTIVE

To Achieve the main objective of the research through sub-objectives to identify the level of application of electronic management in the agricultural extension organization in Iraq by the :

- a. Identify the level of application of electronic management in the field of agricultural scientific activities.
- b. Identify the level of application of electronic management in the field of agricultural extension activities.
- c. Identify the level of application of electronic management in the field of agricultural employees.
- d. 4 - Identify the level of application of electronic management in the field of management .

2. METHODOLOGY

The study was conducted in all the provinces of Iraq, except the Kurdistan Region, the selected responsible they have a practical decision in the extension, scientific, employment, and administrative activities in the Agricultural Extension and Training Department that organizes the department's center and the training and extension centers and extension farms in All of Iraq , the study area includes 15 provinces, and a proportional sample of respondents was selected for the 200 respondents, and the governorates were divided to (northern, central , Middle Euphrates and southern) respectively (4,4,4,3) as shown in Table 1. The study was carried out on 400 agricultural employees, the a proportional sample of 50% from the total respondents, which included 16 extension centers, 57 extension farms, the Agricultural Extension and Training Department Center, The descriptive approach was used to achieve the objects of the research was used to achieve the objects of the research, a questionnaire was designed according to the choice of the research method, to the electronic management of the extension organization in Iraq , and was presented to a group of experts with expertise and Make the required adjustments to verify the research purposes, and delete and add some paragraphs they are ready, and have been field-tested on a sample of 20 respondent out of the research sample and using the Alpha Kornbach equation that was (86) Degree. The researcher used several statistical methods to analyze the data, (percentages, A five-point Likert scale was used to measure the level of e-management application in agricultural extension, and the Likert) data analysis [21], the scale scores 1 degree represent non-application and scale 5 represents for high application. The questionnaire was divided into four areas as follows:

- a. The application of electronic management in the field of agricultural scientific activities was measured by applying the respondents through 10 item, the high level of the scale was 50 degrees, and the minimum degree of the scale was 10 degrees.
- b. The application of electronic management in the field of agricultural extension activities, was measured level the respondents through 10 item, and the high level of the was 50 degrees, and the minimum degree of the scale was 10 degrees.
- c. The application of the electronic management in the field of agricultural employees, was measured level the respondents through 4 item, and the upper degree of the scale was 20 degrees, and the minimum degree of the scale was 4 degrees.
- d. The application of electronic management in the field of administrative affairs, was measured by the application of the respondents through 6 item, and the upper level of the scale was 30 degrees, and the minimum degree of the scale was 6 degrees

Table1. Location and percentage distribution of respondents.

Location	Frequency (N)	Percentage
Governorates Northern	50	25
Governorates Central	62	31
Governorates middle Euphrates	48	24
Governorates Southern	40	20
TOTAL	200	100

Two approaches were used to collect data: individual interview using a standard questionnaire and a focus group discussion, As well as I collected some data via e-mail and the use of some applications such as What Sapp, Viper, and Messenger The scale is designed to measure the competencies and attempts to “measure what an individual believes, perceives, or feels about self, others, activities, institutions or situations” [22].

3. Result and Discussion

3.1. The degree of the application of electronic management in the field of agricultural scientific activities

The results showed the degree of the level respondents' application of electronic management in the field of agricultural scientific activities according to numerical values that ranged between 10-46 degrees, with an average mean of 11.8 degrees, and a standard deviation of 11.2 degrees, the high percentage of the respondents had 58.5%, in the application of electronic management was low, and 38% in the medium level of application, while 3.5% of the respondents had a high degree of application, see Table2.

Table 2. Statement about application E-management in the field of Agricultural scientific activities.

Level of application	Frequency N=200	Percentage
Application Low (10-24) Degree	117	58.5
Application medium (25-39) Degree	76	38
Application High (40-50) Degree	7	3.3
Total	200	100

(Degree of application), 5=Apply strongly, 4=Apply, 3=Neutral, 2=Do not apply, 1= Do not strongly Apply

3.2. The level of application of electronic management in the field of agricultural extension activities

The results showed the degree of the level of the respondents' application of electronic management in the field of agricultural extension activities according to numerical values ranged between 10-46 degrees, with an average mean of 13.3 degrees, and a standard deviation of 12.2 degrees and more than half of the respondents had 52.5%, the degree of their application to electronic management was low, And 43% of the medium of application, while 4.5% of respondents had a high degree of application, see Table 3.

Table 3. Statement about application E-management in the field of agricultural extension activities.

Level of application	Frequency N=200	Percentage
Application Low (10-24) Degree	105	52.5
Application medium (25-39) Degree	84	43
Application High (40-50) Degree	11	4.5
Total	200	100

(Degree of application), 5=Apply strongly, 4=Apply, 3=Neutral, 2=Do not apply, 1= Do not strongly Apply.

3.3. The level of application of electronic management in the field of agricultural employees.

The results showed that the degree of the respondents' level of application of electronic management in the field of agricultural employees according to numerical values ranged between 4-20 degrees, with an average mean of 10.7 degrees, and a standard deviation of 9.5 degrees and more than half of the respondents were 51%, the degree of their application to electronic management was low, and that 42.5% of them had an average level of application, while 6.5% of the respondents had a high degree of application, see Table 4.

Table 4. Statement about application E-management in the field of Agricultural staff.

Level of application	Frequency N=200	Percentage
Application Low (4-9) Degree	102	51
Application medium (10-15) Degree	85	42.5
Application High (16-20) Degree	13	6.5
Total	200	100

(Degree of application), 5=Apply strongly, 4=Apply, 3=Neutral, 2=Do not apply, 1= Do not strongly Apply.

3.4. The degree of the level of application of electronic management in the field of administrative affairs.

The results showed that the degree of the respondents' level of application to electronic management in the field of administrative affairs according to numerical values that ranged between 6-30 degrees, with an average mean of 14.4 degrees and a standard deviation of 13.7 degrees, and that 49% of respondents' application of electronic management was low, and that 38.5% of them were Their average score is moderate, while 12.5% of the respondents have a high degree of application, see Table 5.

Table 5. Statement about application E-management in the field of management Affairs.

Level of application	Frequency N=200	Percentage
Application Low (6-14) Degree	98	49
Application Average (15-23) Degree	77	38.5
Application High (24-30) Degree	25	12.5
Total	200	100

(Degree of application), 5=Apply strongly, 4=Apply, 3=Neutral, 2=Do not apply, 1= Do not strongly Apply.

4. Conclusions and Recommendation

The majority of respondents in the level of weak application of electronic management, because the farmers had traditional administration and has not any scientific information for the farmer about are cultivating the land and caring for the crops they grow and there is no time to review the agricultural department, and most of the computers very old, and there is no network for that information to communicate agricultural information and activities related to agricultural extension the lack of training courses on information and communications technology, even electronically through scientific platforms, the weak electronic archiving of employees, the lack of electronic correspondence despite the geographical dimension between the governorates, there is no email available for every employee through which he communicates with the rest of the employees officially, Weak financial support in developing the electronic management sector in agricultural extension.

It is recommended that its focus on electronic management and its development and work special systems for the agricultural extension organization to communicate scientific recommendations and modern agricultural extension activities and train the extension organization cadres in developing themselves through training courses because developing networks and providing computers can guide the organization to develop the agricultural side scientifically as well as establish extension activities Through farmers' networks, as well as the necessity of providing the financial side because financial resources are the ones that work on the success of human resources and thus the development of agriculture and increasing production. and The necessity of linking a network between the main components of the extension office and extension centers and their farms, while linking and coordinating with agricultural departments in each governorate with the central agricultural extension department.

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